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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/894,125	06/29/2001	Shunpei Yamazaki	740756-2330	7248

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EXAMINER

KEBEDE, BROOK

ART UNIT PAPER NUMBER

2823

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EK

Advisory Action Before the Filing of an Appeal Brief	Application No. 09/894,125	Applicant(s) YAMAZAKI ET AL.	
	Examiner Brook Kebede	Art Unit 2823	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 18 April 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-17, 19-30 and 47-58.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. ☒ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____.
13. ☐ Other: _____.

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Continuation Sheet (PTO-303)

Advisory Action

1. On cursory consideration, the request for reconsideration and the proposed amendment, which has not been entered, does not clearly appear to overcome the rejections.

Information Disclosure Statement

2. The correction made on the information disclosure statement (IDS) which was filed on September 22, 2003, i.e., in order to correct the inadvertent omission of page numbers of Furue article, is noted by the Examiner. Accordingly, the information disclosure statement is being considered by the examiner and a copy of PTO-1449 is attached hereto.

Response to Arguments

3. Applicants' arguments filed on April 18, 2005 have been fully considered but they are not persuasive.

Applicants argued that "Morosawa JP 07-038113 does not teach leveling of surface of the semiconductor film by heating after removing said the natural oxide film," as recited in the independent claims.

In addition, Applicants made the above argument during the personal interview with Mr. Eric J. Robinson and Applicants on April 5, 2005.

During the interview, Applicants provide partial English translation of Morosawa JP 07-038113 patent. According to the partial translated document, Morosawa JP 07-038113 patent appears teaching of alternative process of annealing of the semiconductor film (i.e., silicon film 6) prior to removal of the natural oxide film. However, the Examiner position is that "leveling" process also disclosed by Morosawa JP 07-038113 patent and the Examiner states his position

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that, the rejection will be maintained if there is intrinsic or extrinsic evidence can be in Morosawa JP 07-038113 patent in its entirety that the “leveling” process is done after the removal of “natural oxide” film. See the interview summary of April 5, 2005.

It is respectfully submitted that, based on the full English translation of Morosawa JP 07-038113 patent which is submitted by Applicants on April 18, 2005, Morosawa teaches leveling of the semiconductor layer (i.e., the polysilicon layer 6) after the removal process of “natural oxide” (i.e., native oxide) layer.

For practical purpose, the portion that is relevant to the issue in hand is respectfully submitted from the full translation of Morosawa JP 07-038113 patent herein below. (See also page 6/10 and lines 5-17 of the English translation that was submitted by Applicants on April 18, 2005).

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gate insulating film 9 which is formed of a silicon oxide film and a silicon nitride film is formed over whole surface of the substrate. That is, the silicon oxide film is first deposited over whole surface of the substrate by sputtering, and subsequently, the silicon nitride film is deposited by plasma CVD using the mixed gas including SiH₄,
5 NH₃, and N₂ on the surface of the silicon oxide film. When the silicon nitride film is deposited by plasma CVD, a temperature of the glass substrate 1 is set at approximately 250 °C, SiH₄ is set at approximately 30 SCCM, NH₃ is set at approximately 60 SCCM, N₂ is set at approximately 390 SCCM and it carries out in output power set at approximately 600 W and a pressure set at approximately 0.5 Torr in
10 order to hydrogenate the poly-silicon thin film 6 at the same time and to reduce dangling bonds thereof. Thus, the gate insulating film 9 is deposited by plasma CVD over the poly-silicon thin film 6 and at the same time, the poly-silicon thin film 6 is hydrogenated to decrease the dangling bonds thereof. Therefore, deposition of the gate insulating film 9 and hydrogenation of the poly-silicon thin film 6 can be performed by
15 one-time plasma CVD at the same time. Consequently, a process only for hydrogenation can be omitted, as a result, the number of manufacturing processes can be lessened. Next, a gate electrode 10 including Cr is formed at the top face of the

As shown above, the polysilicon layer 6 treated with ammonia and nitrogen plasma in order to remove the dangling bonds in the polysilicon film 6. This process occurs in conjunction of with the process of depositing of insulating layer which the process also requires heating of the substrate at 250 °C.

As the evidence clearly shown above, it is respectfully submitted that Morosawa teaches all the claimed limitations of claims 47, 48 and 53-58. Furthermore, a prior art reference must be considered in its entirety. See *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

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Therefore, the rejection under 35 U.S.C. 102(b) is deemed proper. In addition, the rejection of claims 19, 20, 23-30, 50 and 52 under 35 U.S.C. 35 U.S.C. 103(a) is deemed proper also.

With respect to claims 1-12-17, 21, 22, 49 and 50, the *prima facie* case of obviousness has been met and the rejection under 35 U.S.C. § 103 is deemed proper.

Correspondence

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brook Kebede whose telephone number is (571) 272-1862. The examiner can normally be reached on 8-5 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on (571) 272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Brook Kebede
Examiner
Art Unit 2823

BK
May 3, 2005